

**PHOTOSENSITIVE POLYMER INCLUDING FLUORINE,  
RESIST COMPOSITION CONTAINING THE SAME AND  
PATTERNING METHOD USING THE RESIST COMPOSITION**

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**ABSTRACT OF THE DISCLOSURE**

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A photosensitive polymer including fluorine, a resist composition containing the same and a patterning method for IC fabrication using the resist composition are provided. The photosensitive polymer having at least one selected from the group consisting of fluorine-substituted or unsubstituted alkyl ester, tetrahydropyranyl ester, tetrahydrofuranylester, nitrile, amide, carbonyl and hexafluoro alkyl having a hydrophilic group, and a trifluorovinyl derivative monomer as a repeating unit and having a weight average molecular weight of about 3,000 to about 100,000. The photosensitive polymer exhibits high transmittance for a light source of  $F_2$  (157 nm), high dry etching resistance, and has characteristics suitable to realize an ultrafine pattern size.